Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Petition to Amend Part 68 of the Commission's Rules to Include Terminal Equipment Connected to Basic Rate Access Service Provided via Integrated Services Digital Network Access Technology	)	CC Docket No. 93-268
and	)	
In the Matter of	)	RM 7815
Petition to Amend Part 68 of the Commission's Rules to include Terminal Equipment Connected to Public Switched Digital Services	)	RM 6147

PETITION FOR RECONSIDERATION AND CLARIFICATION

The Telecommunications Industry Association User Premises Equipment Division hereby files pursuant to Section 1.429 of the FCC's Rules, this Petition for Reconsideration and Clarification in response to the FCC's Report and Order, released in the Federal Register on August 15, 1996, 61 Fed. Reg. 42386, which added Integrated Services Digital Network ("ISDN") and Public Switched Digital Service ("PSDS") requirements to Part 68 of the Commission's Rules ("ISDN/PSDS Order"). The Telecommunications Industry Association is a full-service trade association representing the interests of manufacturers and other suppliers of equipment, systems, and services to the communications and information technologies industry. The Telecommunications Industry Association User Premises Equipment Division (hereinafter "TIA") represents the segment of the industry concerned with customer premises and terminal equipment and

distribution systems used on a customer's premises. The FCC's ISDN/PSDS Order has been reviewed by the technical experts on TIA's Engineering Committee TR-41, and this Petition is based on that review.

In January 1996, the FCC adopted the ISDN/PSDS Order, FCC 96-1, which adds Integrated Services Digital Network and Public Switched Digital Service requirements to Part 68 of the Commission's Rules, 47 C.F.R. §68.1 *et seq.* The ISDN/PSDS Order adopted most of the proposed requirements published in the Notice of Proposed Rulemaking, in Common Carrier Docket No. 93-268, issued in 1993. There are some technical issues and editorial corrections which TIA feels should be reflected in the ISDN/PSDS Order which are explained in the following paragraphs. In addition, TIA requests that the Commission clarify what is intended for plugs and jacks to be used with ISDN and PSDS, as well as hearing aid compatibility ("HAC"), and volume control requirements for these services. Given the recent National Technology Transfer and Advancement Act of 1995, on reconsideration, the FCC may also wish to revisit the role industry standards should play in Part 68, or consider a supplemental rulemaking to address that issue.

RECONSIDERATION AND CLARIFICATION

The FCC is inconsistent in the treatment of encoded analog content.

In paragraph 34, page 14 of the ISDN/PSDS Order, the Commission agrees that "when digital signals are converted to analog and retransmitted on the public switched networks they may carry certain analog signals that pose network harm," therefore the Commission extends the encoded analog protection requirements of Part 68 to ISDN terminal equipment for excessive signal power reasons. For similar reasons, but related to billing protection, digital signals may also contain excessive single frequency ("SF") signals that will cause network harm when decoded and applied to the analog network. This is

no different than the situation that exists for 1.544 Mbps and subrate signals for which Part 68 requires encoded analog signal limits for both amplitude and 2600 Hz. Accordingly, to ensure the same type of protection from network harm, TIA believes that encoded 2600 Hz signals should be included as part of the encoded analog protection requirements for ISDN terminal equipment, in the same manner as requirements applicable to T1 or subrate equipment. TIA recommends that § 68.314(d)(2) be modified to include ISDN primary rate access ("PRA") and basic rate access ("BRA"), as follows:

> Section 68.314 Billing Protection
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> 68.314(d)(2) Registered terminal equipment for connection to subrate, 1.544 Mbps, ISDN Primary Rate Access (PRA) and Basic Rate Access (BRA) digital services shall not deliver digital signals to the telephone network with encoded analog content energy in the 2450 to 2750 Hertz band unless at least an equal amount of encoded analog energy is present in the 800 to 2450 Hertz band.

The Signal Power rules require clarification.

With regard to the ISDN/PSDS Order, § 68.308(h)(3)(i), page 32, TIA requests clarification on the application of the pulse template. It is unclear whether the rectangular pulse or the limiting pulse template applies in determining compliance with the requirements of this Section. TIA believes that only the limiting pulse template applies. It appears that the Commission's intent is to follow the wording stated in the current § 68.308(h)(1)(ii), which specifies the pulse template requirements for subrate devices.

TIA recommends that the wording of § 68.308 (h)(3)(i) be the same as the above mentioned § 68.308 (h)(1)(ii) for consistency and clarity purposes, as follows:

> Section 68.308 Signal Power Limitations
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> 68.308 (h)(3)(i) *Template for maximum output pulse.* When applied to a 135 ohm resistor, the instantaneous amplitude of the

largest isolated output pulse obtainable from the registered terminal equipment shall not exceed by more than ten percent the instantaneous voltage defined by a template obtained as follows: The limiting pulse template shall be determined by passing an ideal 50 percent duty cycle rectangular pulse with the amplitude/pulse rate characteristics defined in Table IV(A) for Type II, or Table IV(B) for Type III, through a one pole low pass filter with a 3 dB cut off frequency of 260 kHz.

With regard to paragraph 45, page 17 of the ISDN/PSDS Order, the Commission stated that PSDS Type I would be specifically included in §68.308(b)(1)(viii) and (b)(2)(iii) to close loopholes in the rules. TIA believes that the Commission should also include references to PSDS Type I in §68.308(h)(1)(ii) to avoid misinterpretation and confusion, as PSDS Type I must comply with the same pulse template requirements as subrate 56 kbps devices. TIA recommends that § 68.308 (h)(1)(ii) be modified to read as follows:

Section 68.308 Signal Power Limitations

§ 68.308 (h)(1)(ii) *Template for maximum output pulse*. When applied to a 135 ohm resistor, the instantaneous amplitude of the largest isolated output pulse obtainable from the registered terminal equipment, <u>intended for connection to subrate and PSDS Type I services</u>, shall not exceed by more than ten percent the instantaneous voltage defined by a template obtained as follows: The limiting pulse template shall determined by passing an ideal 50 percent duty cycle rectangular pulse with the amplitude/pulse rate characteristics defined in Table I through a single real pole low pass filter having a cutoff frequency in Hertz equal to 1.3 times the bit rate . . . .

The FCC needs to clarify what is desired for plugs and jacks.

In its Comments filed in response to the Notice of Proposed Rulemaking ("NPRM") in CC Docket No. 93-268, TIA noted the issue of plugs and jacks for ISDN raised thorny issues. (TIA's Comments, February 10, 1994, pp. 6-8.) TIA pointed out that in CC Docket No. 88-57 the FCC had changed its previous policy and removed the old requirement to have telephone company-supplied Network Interface Jacks ("NIJ") at the interface to network services for simple wiring. Connections could even be hardwired by consumers as long as they did not access the protector. Many issues in CC Docket No. 88-57 have been pending reconsideration for over five years. In the meantime, service providers and public service commissions have implemented the FCC's Docket 88-57 policy as best they understand it, often extending consumer rights under the "Telerent Doctrine," and having no telephone company-supplied jack connection at the network interface, even for complex systems.

The FCC's policy before the ISDN/PSDS Order, would have provided that if a service provider were to provide a NIJ anyway, then the customer determines the jack configuration at the interface. (See Section 68.502.) The rules further provide that in the absence of a request for a specific jack configuration, the telephone company shall install the standard jack depicted in §68.502(a)(1). That Section goes on to say: "If a telephone subscriber wishes to have the telephone company install a standard jack other than the one depicted in §68.502(a)(1) below, he shall specify the appropriate [Universal Service Ordering Code ("USOC")] when requesting the installations." The current Section 68.104 before the ISDN/PSDS Order does not require a jack at the interface for simple wiring, and the FCC made no changes via the ISDN/PSDS Order to this Section thus leaving the *status quo*. Thus, when the FCC states in the ISDN/PSDS Order that it "will require use of eight-position connectors for ISDN and PSDS services under Part 68," (ISDN/PSDS Order, para. 17, emphasis added), it is not clear: (i) whether the FCC intended to modify its current rule and will now

mandate NIJs but did not list a rule change in the Annex to implement this; or (ii) whether it meant to leave the 68.104 requirement as is but take away the consumer choice the present rules afford, or (iii) whether the FCC intended to impose regulation over previously unregulated jacks on customers' premises where the terminal equipment actually connects (e.g., behind a desk). The specific action the FCC wants the industry to take needs to be clarified.

Many of the standards listed by the FCC relate to unregulated premises wiring where the consumer decides what type of jacks will be installed and generally will pick those that are compatible with the terminal equipment used. Currently the FCC does not regulate such jacks for wiring configuration or type, other than to impose some of the mechanical requirements of Part 68 if 6-pin or 8-pin hardware is used.

Many of the applications for ISDN or PSDS services will be high-rise office buildings where network services may be terminated in the basement, yet the actual ISDN equipment will connect via a customer-provided, unregulated jack on an upper floor. TIA sees no need to re-regulate such inside wiring.

When the Commission talks about "services" in the ISDN/PSDS Order it is not clear whether a specific demarcation point at the network interface is being discussed, or whether the FCC is discussing the service delivered -- via unregulated wiring and jacks -- to the desk holding the ISDN telephone.

Some ISDN services are primarily used with PBXs and other complex systems. Again, even in these cases, the network services may terminate in the basement of a high-rise building without any jacks being provided at that point, and be extended by unregulated wiring to the equipment room housing the PBX.

TIA noted in its earlier NPRM Comments that the plug/ jack issue for ISDN and PSDS raised thorny issues. The ISDN/PSDS Order has failed to remove the thorns. On reconsideration the Commission should clarify specifically what it wants the industry to do, and modify the rule sections to implement that decision.

Since the FCC is adding ISDN Services to its Part 68 rules, on reconsideration, TIA recommends specifically listing the TIA Standard for HAC for such ISDN terminal equipment and clarifying the volume control requirements.

TIA participated in the FCC's Hearing Aid Compatibility Negotiated Rulemaking Committee ("HACNRC"). That effort led to a recent FCC Report and Order in CC Docket No. 87-124, released July 3, 1996, FCC 96-285, modifying the FCC HAC rules ("1996 HAC Order"). In the record in that proceeding, TIA specifically noted that there is a separate TIA Standard for HAC for ISDN Terminal Equipment, ANSI/TIA/EIA-504-1-94. TIA recommends also listing that Standard in Section 68.316 now that ISDN equipment is going to be registered under Part 68. Otherwise manufacturers may try to apply the wrong standard.

In the 1996 HAC Order, the FCC also decided to impose a new volume control requirement on telephones. It is clear from the 1996 HAC Order (para. 85-86), the FCC intended to cover digital telephones and specifically ISDN digital telephones, but since the FCC tied such issues to "registered" equipment and since ISDN telephones cannot be registered until the ISDN/PSDS Order is legally effective, some confusion may exist as to whether ISDN telephones manufactured after April 1, 1997 need the new HAC label, and whether the November 1, 1998, date for the volume control feature is also effective for ISDN telephones. This should be clarified on reconsideration.

The Commission may wish to reconsider the use of industry standards in light of recent legislation.

In its NPRM Comments (pp. 2-3), TIA noted that the FCC's rulemaking process for Part 68 should be streamlined. The Ameritech Petition for Rulemaking to add PSDS to Part 68 was filed October 26, 1987 and the Southwestern Bell Telephone Company Petition for Rulemaking to add ISDN to Part 68 was filed August 23, 1991. Such delays of over 9 years before an Order becomes effective do not appear to serve the public interest and jeopardize harmonization efforts with other countries for technical regulations. TIA suggested more reliance on industry standards as one alternative to address this problem.

In the ISDN/PSDS Order, the FCC agreed with TIA:

> . . . that any future effort to harmonize our terminal equipment attachment rules with those of other countries will be frustrated if, after technical requirements are initially harmonized, the regulatory process fails to keep pace with technological changes. For this reason, we believe that it is advantageous for the Commission and the nation to rely, whenever possible, on standards bodies composed of industry experts to resolve complex technical matters. (Para. 28)

In fact the FCC has used TIA standards as specific references in some of its policy decisions and rules. However, it appears the FCC is reluctant to rely more on such industry standards than it already has.

Subsequent to the FCC's adoption date of the ISDN/PSDS Order, a new law took effect in February, 1996, the National Technology Transfer and Advancement Act of 1995. Section 12 of that Act provides new Congressional direction to federal agencies. Specifically that Section provides:

> Section 12 . . .
>
> (d) UTILIZATION OF CONSENSUS TECHNICAL STANDARDS BY FEDERAL AGENCIES; REPORTS-
> (1) IN GENERAL- Except as provided in paragraph (3) of this subsection, all Federal agencies and departments shall use technical standards that are developed or adopted by voluntary consensus standards bodies,

> using such technical standards as a means to carry out policy objectives or activities determined by the agencies and departments.
> (2) CONSULTATION; PARTICIPATION- In carrying out paragraph (1) of this subsection, Federal agencies and departments shall consult with voluntary, private sector, consensus standards bodies and shall, when such participation is in the public interest and is compatible with agency and departmental missions, authorities, priorities, and budget resources, participate with such bodies in the development of technical standards.
> (3) EXCEPTION- If compliance with paragraph (1) of this subsection is inconsistent with applicable law or otherwise impractical, a Federal agency or department may elect to use technical standards that are not developed or adopted by voluntary consensus standards bodies if the head of each such agency or department transmits to the Office of Management and Budget an explanation of the reasons for using such standards. Each year, beginning with fiscal year 1997, the Office of Management and Budget shall transmit to Congress and its committees a report summarizing all explanations received in the preceding year under this paragraph.
> (4) DEFINITION OF TECHNICAL STANDARDS- As used in this subsection, the term `technical standards' means performance-based or design-specific technical specifications and related management systems practices.

Given this new Congressional guidance, as well as the FCC's own review via the Network Reliability and Interoperability Council ("NRIC III") Focus Group II work looking at the role of the FCC in standards setting, the Commission may wish to reconsider its decision here or adopt a new Notice of Proposed Rulemaking to streamline Part 68 and rely more on industry standards for the detailed technical requirements, and limit its express rules to its policy goals. In the past, the FCC has commented favorably on the Tariff Alternative under Section 68.104, as making jacks available more quickly when there is industry consensus, perhaps the FCC should also consider an equivalent measure such as "A Voluntary, Consensus, Industry Standard" as an alternative in Part 68.

OMISSION AND CORRECTION

There are two editorial errors found in the ISDN/PSDS Order. The first one deals with the omission of Part 68 paragraph 68.308(h)(4) from the ISDN/PSDS Order. This paragraph was cited in TIA's Comments of February 10, 1994, on the Notice of Proposed Rulemaking, CC Docket No. 93-268. The paragraph concerns the encoded analog requirements for ISDN BRA. TIA recommends that the aforementioned paragraph be added as published in the Notice of Proposed Rulemaking, as follows:

> Section 68.308 Signal Power Limitations
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> § 68.308 (h)(4) Limitations on Terminal Equipment Connected to ISDN BRA. If registered terminal equipment connecting to ISDN BRA services contains a digital-to-analog converter, or generates signals directly in digital form, which are intended for eventual conversion into voiceband analog signals, the encoded analog content of the digital signal must be limited. The maximum equivalent power of the encoded analog signals, other than live-voice, as derived by a zero-level-decoder test configuration, shall not exceed -12 dbm when averaged over a three-second interval. The maximum equivalent power of encoded analog signals, as derived by a zero-level-decoder test configuration, for network control signaling, shall not exceed -3 dbm when averaged over any three-second interval.

The second error deals with the requirements for pulse repetition rate of PSDS equipment. In paragraph 46, page 17 of the ISDN/PSDS Order, the Commission agreed that "as PSDS services receive their referencing clock from the serving central office, the tolerances of the clock for the terminal equipment does not raise a concern about potential network harm." However, the requirements were inadvertently left in the ISDN/PSDS Order.

CONCLUSION

TIA urges the Commission to examine the issues cited for reconsideration and clarification and include this information in an Order on Reconsideration. Further, TIA requests that the recommended corrections be made and omissions be included in that Order.

Respectfully submitted,

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